

APPENDIX E: DESERT TORTOISE MITIGATION MEASURES

These measures are intended to minimize impacts to the tortoise. As appropriate, these mitigation measures will be taken by the National Park Service or included, as stipulations, with Special Use Permits issued by the National Park Service.

GENERAL MITIGATION MEASURES

1. Authorization of Biologists

An authorized biologist is a person approved by the U.S. Fish and Wildlife Service for moving tortoises out of a project area or from harm's way for a specific project. Such approval is granted only where a "take" has been approved by the U.S. Fish and Wildlife Service.

A qualified biologist is a person with appropriate education, training and experience to conduct tortoise surveys, monitor project activities, provide worker education programs, and supervise or perform other implementing actions. The person may or may not be an authorized biologist. Review of credentials is at the discretion of the National Park Service.

2. Worker Training

All workers, including participating agency employees and construction and maintenance personnel, and others who implement authorized actions shall be given special instruction in protection of listed species including occurrence, sensitivity, and activity patterns of the desert tortoise. Instruction shall also include legal protection and penalties for violation of federal and state laws.

3. Compliance

The project proponent shall designate an individual as field contact representative (FCR) who shall be responsible for overseeing compliance and for coordination with the authorizing agency. Compliance shall include conducting species surveys, proper removal of species from areas being impacted, assurance that a sufficient number of qualified biologists are present during surface disturbance, and that all conditions of the authorization are being met by proponent, contractors, and workers. The FCR shall have the authority to halt activities that are in not in compliance with the authorization.

After completion of the project, the National Park Service shall conduct a review to determine if the permittee complied with the conditions of the permit. Corrective actions shall be required of the proponent where conditions have not been met.

4. Compensation

A mitigation fee based on the amount of acreage disturbed shall be required of the permittee. The formula used to determine the amount of acreage to be acquired is described in the Management Oversight Group (MOG) Desert Tortoise Management Policy and considers the following factors:

These factors are added together to arrive at an acreage multiplier use to determine the amount of

compensation acres to be acquired by the project proponent. Category III habitat receives a compensation rate of 1.0 regardless of other factors.

5. Pre-construction Clearance Surveys

Pre-construction surveys shall be conducted to locate and remove desert tortoises prior to grading or actions which might result in harm to a desert tortoise or which remove tortoise habitat. The survey shall be conducted by an authorized biologist within 24 hours of the onset of the surface disturbance unless a tortoise-proof fence has been installed that would prevent re-entry of the animals.

6. Surface Disturbance

All surface disturbing activity shall be limited to the land area essential for the permitted project or activity. In determining these limits, consideration shall be given to topography, public health and safety, placement of facilities, and other limiting factors. Work area boundaries and special habitat features shall be appropriately marked to minimize disturbance. Where possible, previously disturbed areas shall be used as work sites and for storage of equipment, supplies, and excavated material.

Pre-construction activity, such as removal of vegetation, shall occur in the presence of a qualified biologist. No overnight hazards to desert tortoises shall be created by this activity (e.g., auger holes or any steep-sided depressions); hazards shall be eliminated each day prior to the work crew leaving the site.

Large disturbed areas, such as open-pit mines and landfills, shall be enclosed with tortoise-proof fencing to keep desert tortoises out of the work area. The fencing shall be removed when restoration of the site is completed. Temporary fencing shall be required around test sites where trenching or drill holes could trap animals or around other small, short-term projects where tortoises could move into the work area. Occasionally, seasonal restrictions and/or monitoring are required to alleviate the need for fencing.

Project maintenance and construction, stockpiles of excavated materials, equipment storage, and vehicle parking shall be limited to existing disturbed areas wherever possible. Should use of existing disturbed areas prove infeasible, any new disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows or vegetation, public health and safety, and other limiting factors. Special habitat features, particularly tortoise burrows, shall be flagged by the qualified biologist so that they may be avoided by installation equipment and during placement of poles and anchors.

7. Refuse Disposal

All trash and food items generated by construction and maintenance activities shall be promptly contained and regularly removed from the project site to reduce the attractiveness of the area to common ravens and other desert predators. Portable toilets shall be provided on-site if appropriate.

8. Pets

Pets shall be restrained either by enclosure in a kennel or by chaining to a point within the tortoise-proof enclosure if one has been constructed for the activity.

9. Ravens

Structures which may function as common raven nesting or perching sites are not authorized except as specifically stated in the appropriate NPS document. The permittee shall provide a graphic description of all structures to be erected on the site. Some actions are required to mitigate actual nesting on authorized structures, such as requiring the proponent to secure necessary permits to remove nests and to remove such nests in a timely fashion. The U.S. Fish and Wildlife Service does not (or rarely) authorize nest removal if birds are present in the nest, but does authorize nest removal after birds have left.

10. Firearms

Use or possession of firearms by the permittee or his/her agents in the project area shall be prohibited.

11. Motorized Access

Motor vehicle access is limited to maintained roads and designated routes.

Where access from a maintained road or designated route to a project's site is part of the approved development plan, length and location of the route shall be designed to minimize impact to the habitat. The amount of disturbed area shall be subject to the mitigation fee, and the route shall be designated "Limited Use" and not open to the public.

a. **Speed Limits:** Vehicle speed within a project area, along right-of-way maintenance roads and on routes designated for limited use shall not exceed 20 miles per hour. Speed limits shall be clearly marked by the permittee, and workers shall be made aware of these limits.

b. **Tortoises Under Vehicles:** Vehicles parked in desert tortoise habitat shall be inspected immediately prior to being moved. If a tortoise is found beneath a vehicle, the authorized biologist shall be contacted to move the animal from harms-way, or the vehicle shall not be moved until the desert tortoise leaves of its own accord. The authorized biologist shall be responsible for taking appropriate measures to ensure that any desert tortoise moved in this manner is not exposed to temperature extremes which could be harmful to the animal.

12. Route Maintenance and Surface Restoration

The following mitigation measures shall be implemented during all route maintenance and surface restoration projects:

a. **Heavy Equipment:** Operators of heavy equipment (such as roadgraders) shall be accompanied by a qualified biologist when working in desert tortoise habitat during the desert tortoise's active period (March 1 to October 31). The qualified biologist shall walk in front of the equipment during its operation and shall function as the field contact representative and have the responsibility and authority to halt all project activity should danger to a desert tortoise arise. Work shall proceed only after hazards to the desert tortoise are removed, the desert tortoise is no longer at risk, or the desert tortoise has been moved from harms way by an Authorized Biologist.

During the desert tortoise's inactive period (November 1 to the end of February), an on-site monitor is not required, but the equipment operator shall be qualified as described under measure 12d. Otherwise the operator shall be accompanied by a qualified biologist. The operator shall

watch for desert tortoises while using the equipment and shall have the responsibility for preventing harm to desert tortoises, as described under measure 12a.

Operators of light equipment used for trail maintenance and project leaders for surface reclamation actions shall watch for desert tortoise or burrows during all project activities. They shall have the responsibility for preventing harm to desert tortoises, as described under measure 12a. They shall be qualified as described in measure 12d.

b. **Injury:** Should any desert tortoise be injured or killed, all activities shall be halted, and the authorized biologist immediately contacted. The biologist shall have the responsibility for determining whether the animal should be transported to a veterinarian for care, which is paid for by the permittee, if involved. If the animal recovers, the U.S. Fish and Wildlife Service is to be contacted to determine the final disposition of the animal; few desert tortoise are returned to the wild.

c. **Report:** The equipment operator, or authorized biologist shall keep a tally of all desert tortoises seen, moved, injured or killed during the project. Other required elements are: rating the effectiveness of required mitigation, a breakdown of actual habitat disturbance, and suggestions for improving mitigation.

d. **Ditches:** The equipment operator or qualified biologist shall inspect ditches for desert tortoise burrows before moving or shoveling any soil. If a desert tortoise burrow is present, the ditch shall be left undisturbed if possible. If the equipment operator inspects ditches for desert tortoise burrows, he or she shall be adequately trained in the identification of desert tortoise sign by the authorized biologist prior to conducting inspections.

e. **Burrows:** If a burrow is occupied by a desert tortoise and avoidance of the burrow is not possible during road maintenance or reclamation activities, the authorized biologist shall make the final determination. Only an authorized biologist may excavate the desert tortoise, following established protocols.

f. **Grading:** To avoid building up tall berms that may inhibit desert tortoise movement, the operator should minimize lowering of the road bed while grading. Berms higher than 12 inches or a slope greater than 30 degrees shall be pulled back into the road bed.

g. **Speed Limits:** The equipment operator shall watch for desert tortoises on the road whenever driving, transporting or operating equipment. Driving speeds shall not exceed 20 miles per hour, and operating speeds should not exceed 5 miles per hour to allow for adequate visibility.

SPECIAL MITIGATION FOR SPECIFIC USES

13. Mineral Exploration and Development

In addition to mitigation measures described above for general mitigation, the following special mitigation measures shall apply to small mining operations in which the surface disturbance or area from which desert tortoises are to be removed is less than ten acres:

a. **Compliance:** A qualified biologist shall be on-site during the initial mining activity.

b. **Explosives:** If explosives are authorized, the NPS biologist or environmental specialist shall

verbally consult with the appropriate FWS office to determine what measures shall be required to reduce the potential to take desert tortoises. These measures may include:

- 1) Seasonal restrictions upon the use of explosives;
- 2) Temporary removal of desert tortoises from areas potentially at risk during detonation either directly from the explosion or by thrown materials. All handling and storage of desert tortoises for this purpose shall be conducted as described in measure 3 by an authorized biologist.
- 3) Covering of desert tortoise burrows to reduce impacts of flying materials.

14. Special Use Permit/Events

A Special Use Permit is needed for organized events involving fifteen or more individuals or seven or more vehicles. In issuing the permit, appropriate mitigation measures, in order to minimize the impact on the desert tortoise or other path resources, will be included. For certain activities, an Environmental Assessment may be necessary.

16. Utility Pipelines and Underground Cables

For construction and maintenance of all pipelines, fiber-optic lines, and other utilities requiring trenching, the following measures shall apply:

- a. **Width:** Construction rights-of-way shall be restricted to the narrowest possible width.
- b. **Exceptions:** All project construction and maintenance shall be restricted to the authorized right-of-way. If unforeseen circumstances require expansion beyond the right-of-way, the potential expanded work areas shall be surveyed for desert tortoises.
- c. **Access:** Vehicular travel shall be limited to the right-of-way. Access to the right-of-way shall be limited to public roads and designated routes.
- d. **Trenches:** Open trenches shall be regularly inspected by the authorized biologist at a minimum of once per day, and any desert tortoises that are encountered shall be safely removed. For small projects, escape ramps are sometimes required. The length of the trench left open at any given time shall not exceed that distance which will remain open for one week or less in duration. A final inspection of the open trench segment shall be made by the authorized biologist immediately prior to backfilling. Arrangements shall be made prior to the onset of maintenance or construction to ensure that desert tortoises can be removed from the trench without violating any requirement of the Occupational Safety and Health Administration.
- e. **Maintenance:** Observations of desert tortoises or their sign during maintenance shall be conveyed to the field supervisor and a biological monitor. Employees shall be notified that they are not authorized to handle or otherwise move tortoises encountered on the project site.
- f. **Compliance:** Sufficient authorized and qualified biologists shall be present during maintenance or construction activities to assist in the implementation of on-site mitigation measures for the desert tortoise and to monitor compliance. The appropriate number of biologists will depend upon the nature and extent of the work being conducted and shall be stated in the

right-of-way grant for each particular action, after consultation with the specific resource area office authorizing the action.

g. **Final Assessment:** The authorizing agency shall ensure that maintenance or construction activities are confined to the authorized work areas by means of a post-project assessment. The assessment may be conducted by the authorized biologist. If maintenance or construction activities have extended beyond the flagged work areas, the National Park Service shall ensure that the project proponent restores these disturbed areas in an appropriate manner.

h. **Restoration:** The proponent shall be required to restore disturbed areas in a manner that would assist re-establishment of biological values within the disturbed rights-of-way. Methods of restoration shall include, but not be limited to; road closure, the reduction of erosion, resspreading of the top two to six inches of soil, planting with appropriate native shrubs, and scattering any bladed vegetation and rocks, where appropriate, across the right-of-way.

18. Power Transmission

The following mitigation measures shall be implemented during all construction and maintenance of transmission lines: (Where Memorandums of Understanding (MOUs) or other agreements are appropriate, measures will be included within the agreement).

a. **Surveys:** When access along the utility corridor already exists, pre-construction surveys for transmission lines shall provide 100 percent coverage for any areas to be disturbed and within a 100-foot buffer around the areas of disturbance. When access along the utility corridor does not already exist, pre-construction surveys for transmission lines shall follow standard protocol for linear projects.

b. **Access:** To the maximum extent possible, access for transmission line construction and maintenance shall occur from public roads and designated routes.

c. **Disturbed Areas:** To the maximum extent possible, transmission pylons and poles, equipment storage areas, and wire-pulling sites shall be sited in a manner that avoids desert tortoise burrows.

d. **Restoration:** Whenever possible, spur and access roads and other disturbed sites created during construction shall be recontoured and restored.

e. **Ravens:** All transmission lines shall be designed in a manner that would reduce the likelihood of nesting by common ravens. Each transmission line company shall remove any common raven nests that are found on its structures. Transmission line companies must obtain a permit from the U.S. Fish and Wildlife Service's Division of Law Enforcement to take common ravens or their nests.

